

INNOVATION IN RAILWAYS

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Innovation in Railways Indian Railways operates at a massive scale in every imaginable dimension and is among the world's largest rail network, spread over 1,23,236 kms, with 13,523 passenger trains and 9,146 freight trains, carrying 23 million travellers and 3.5 MT of freight daily from 7,349 stations. A dedicate 1.2 Million plus Manpower works round the clock to keep the wheels moving. Such a large-scale operation provides ample opportunities for Innovations in various facets of its working. Be it Technology, Operations, Commercial, IT or Human resources, the possibilities of introducing new ideas & Innovations to improve and increase efficiency are immense. ASSIMILATING INNOVATIONS Indian Railways provides an effective Innovation Ecosystem involving free flow of technology and information among people, enterprises and institutions, which is the key to an innovative process. It allows interactions between the actors needed in order to turn an idea into a process, product, or service to achieve the ultimate objective of the organisation. Being the Lifeline of nation, IR has been continually making innovations in its Technology, Service, Operations and Overall System to lead the nation on path to a modern and ever progressing future. A few innovative improvements are the State of the Art SMART Coaches having special diagnostic systems and sensors connected to integrated computer systems for increased passenger comfort, SMART Locomotives having new features as Asset Performance Monitor (APM), Locotrol, LocoVision, Rail Integrity Monitor (RIM) etc, SMART Yards with ICT systems, sensors and data analytics to automatically gather information on rolling stock conditions, Automated Train Examination System (ATES), new technology Signalling Systems with new features being added as indigenous Automatic Train Protection (ATP) system, Centralized Traffic Control (CTC), Train Management System (TMS) etc.

Besides these many improvements as Dedicated Freight Corridors, Self-designed Vande Bharat Express, Tejas Express, Vistadome Coaches, New Signalling Systems, Long Haul Freight Trains, High Capacity & High Speed Wagons, Kisan Rail, Solar Powered Passenger Coaches etc have been done to bring about sea change in the Customer comforts and expectations.